

CASE REPORT

A case of severe eczema following use of imiquimod 5% cream

C L Taylor, M Maslen, M Kapembwa

Sex Transm Infect 2006;**82**:227–228. doi: 10.1136/sti.2005.018226

Imiquimod 5% cream, an immune response modifier licensed for treatment of external ano-genital warts and superficial basal cell carcinomata, is known to cause local erythema, oedema and, rarely, exacerbation of psoriasis. We describe a case of exacerbation of eczema following application of this cream in a man with penile warts.

A 35 year old HIV negative man presented to the genitourinary medicine (GUM) clinic with penile warts. His medical history was remarkable for eczema dating from childhood, albeit stable for at least 10 years. Treatment, with podophyllotoxin 0.15%, followed by cryotherapy, was unsuccessful and imiquimod 5% cream three times weekly was prescribed.

After two applications, the patient developed severe eczema with pustules in areas of the skin previously affected by this condition. These included flexor and extensor surfaces of the arms and hands, posterior and lateral neck and scalp. The skin was indurated and inflamed but lacked the redness, plaques, or nail changes typical of psoriasis. The appearances were entirely consistent with eczema and in keeping with the patient's previous experience of this dermatological disease. There was no local reaction to imiquimod on the penile shaft.

His general practitioner advised him to stop the imiquimod cream and prescribed flucloxacillin and prednisolone and the eczema resolved. At his next visit to the GUM clinic, a second trial of imiquimod was recommended, as an association with the eczema was considered unlikely. Following two applications of the cream, the eczema and pustules recurred (fig 1). He denied accidental application of the cream on his arms. Lesions resolved after a repeat course of antibiotics and steroids (fig 2). Wart treatment continues with weekly cryotherapy.

DISCUSSION

The temporal relation of the recurring eczematous reaction, to imiquimod at sites previously affected by eczema, strongly suggests an association between this compound and eczema. In addition, the absence of any local reaction at the site of application indicates systemic absorption of imiquimod with possibly augmented T cell response and reactivation of previous disease.

Imiquimod acts by activating immune cells via the toll-like receptor (TLR) 7,¹ thus increasing local production of endogenous cytokines such as interferon α (IFN- α) and enhancing natural killer (NK) and cytotoxic (Tc) cell activity.² Thus, the absence of any local reaction at the site of application in our patient suggests systemic absorption of



Figure 1 Skin appearance after two applications of imiquimod cream.



Figure 2 Skin appearance after discontinuation of imiquimod treatment.

imiquimod and possibly augmented T cell response resulting in reactivation of previous disease.

There are previous reports associating imiquimod cream with exacerbations of psoriasis local to the application of the cream, including appearance of plaques at distant sites. The current "Summary of product characteristics" for Aldara³ states "Imiquimod cream has the potential to exacerbate inflammatory conditions of the skin." However, an association with eczema has not been reported.

This case highlights the need for caution in the use of imiquimod 5% cream or other immune response modifier therapy in those with a history of eczema and other significant inflammatory dermatological conditions. Further investigation of imiquimod and cytokine response in such individuals is needed to clarify the nature of this immunological reaction.

ACKNOWLEDGEMENTS

We thank Dr Sara Marshall, consultant immunologist, Imperial College, London, UK.

Authors' affiliations

C L Taylor, Department of Genitourinary Medicine, Northwick Park Hospital, Watford Road, Harrow, Middlesex HA1 3UJ, UK

M Maslen, Imperial College Medical School, London, UK

M Kapembwa, Department of Genitourinary Medicine, Northwick Park Hospital, London, UK

Competing interests: none.

Correspondence to: Dr Clare L Taylor, Department of Genitourinary Medicine, Northwick Park Hospital, Watford Road, Harrow, Middlesex HA1 3UJ, UK; claretaylor@doctors.net.uk

Accepted for publication 11 October 2005

REFERENCES

- 1 **Sauder DN**. Mechanisms of action and emerging role of immune response modifier therapy in dermatologic conditions. *J Cutan Med Surg* 2005;**8**:3–12.
- 2 **Arany I**, Tyring SK, Stanley MA, *et al*. Enhancement of the innate and cellular immune response in patients with genital warts treated with topical imiquimod cream 5%. *Antiviral res* 1999;**43**:55–63.
- 3 Aldara 5% Cream: summary of product characteristics EU/1/98/080/001 July 2004.